**Study Guide**

**Sound and Light**

How does light travel?

What do you need to produce sound?

What do waves carry?

During a storm, you may see lightening before hearing thunder. Explain why.

Why do certain instruments make different sounds?

Glasses that have colored tint in them are considered what? Choose an answer and explain why.

**Opaque, transparent, translucent, mechanical, transverse, longitudinal, or bright.**

Why does a green shirt appear green or a red shirt appear red?

What happens when you make strings on an instrument tighter?

What happens if you put a ping pong ball in a huge bowl of water and make waves in the water?

An electromagnetic wave with a shorter wavelength has what type of frequency?

An electromagnetic wave with a longer wavelength has what type of frequency?

Define

* Pitch
* Wave
* Frequency
* Longitudinal wave
* Transverse wave
* Loudness
* Amplitude
* Wavelength
* Refraction, reflection
* Opaque
* Translucent
* Transparent
* Radiant energy
* Electromagnetic wave
* Crest

If this were sound waves, which diagram would show the loudest pitch? \_\_\_\_\_ A quiet pitch? \_\_\_\_\_

Or a high pitch? \_\_\_\_\_\_ or low pitch? \_\_\_\_

Diagram A

Diagram B

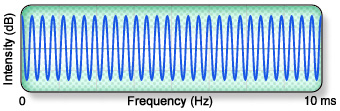
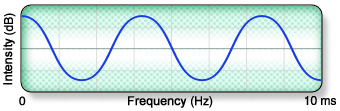
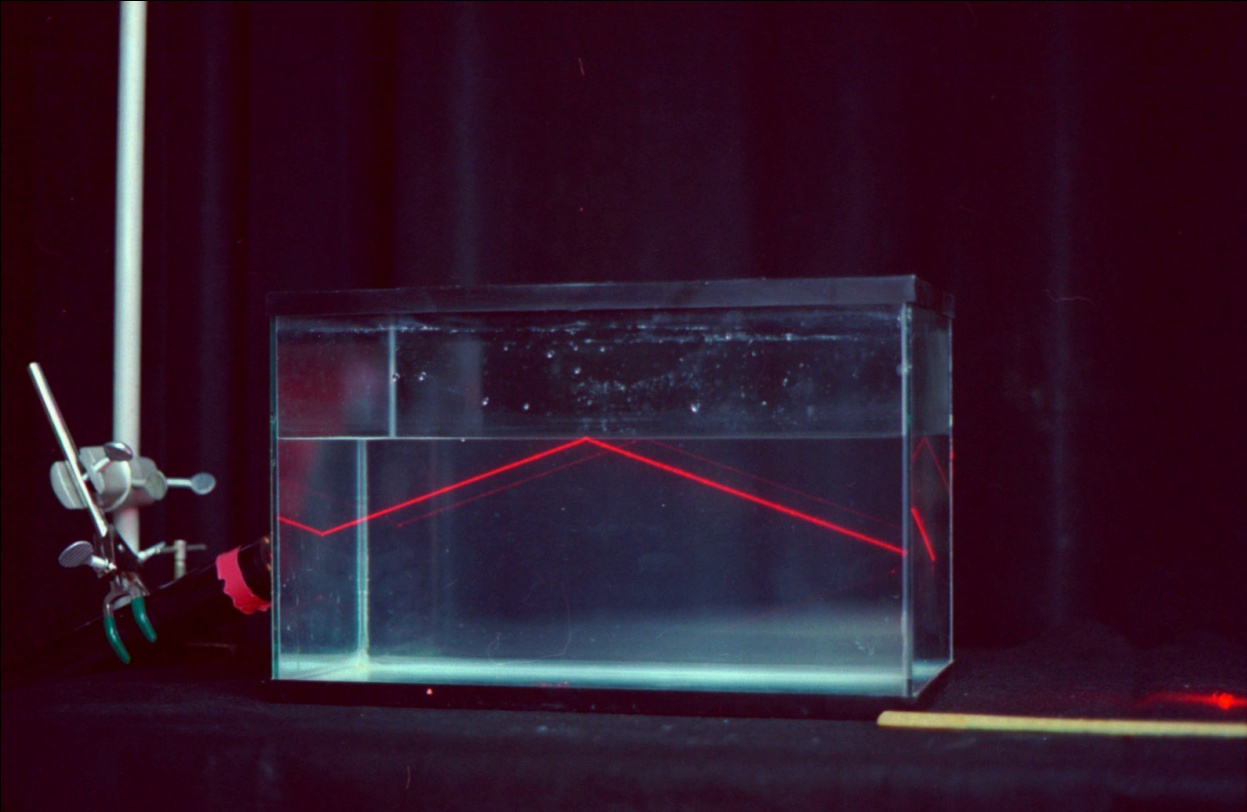


Diagram C







Where would reflection and refraction occur?

When would the light travel faster? Slower?